

# Exhibit 4

**U.S. Patent No. 8,244,582 (“’582 Patent”)**

Microsoft’s advertising platform and all configurations thereof infringe at least Claim 1 of the ’582 Patent.

Claim 1	Microsoft’s advertising platform
<p>1[pre]. An automated method of collecting profiles of Internet-using entities, the method comprising:</p>	<p>To the extent the preamble is limiting, Microsoft’s advertising platform performs an automated method of collecting profiles of Internet-using entities.</p> <p><i>See, e.g.,</i> evidence and analysis for claim limitations (a)-(e) below.</p> <p>Microsoft collects data from you, through our interactions with you and through our products for a variety of purposes described below, including to operate effectively and provide you with the best experiences with our products. You provide some of this data directly, such as when you create a Microsoft account, administer your organization’s licensing account, submit a search query to Bing, register for a Microsoft event, speak a voice command to Cortana, upload a document to OneDrive, purchase an MSDN subscription, sign up for Office 365, or contact us for support. We get some of it by collecting data about your interactions, use, and experience with our products and communications.</p> <p>Source: <a href="https://privacy.microsoft.com/en-us/privacystatement">https://privacy.microsoft.com/en-us/privacystatement</a></p> <ul style="list-style-type: none"> <li>• <b>Interest-based advertising.</b> Microsoft uses cookies to collect data about your online activity and identify your interests so that we can provide advertising that is most relevant to you. You can opt out of receiving interest-based advertising from Microsoft as described in the <a href="#">How to access and control your personal data</a> section of this privacy statement.</li> <li>• <b>Showing advertising.</b> Microsoft uses cookies to record how many visitors have clicked on an advertisement and to record which advertisements you have seen, for example, so you don’t see the same one repeatedly.</li> </ul> <p>Source: <a href="https://privacy.microsoft.com/en-US/privacystatement#maincookieessimilartechnologiesmodule">https://privacy.microsoft.com/en-US/privacystatement#maincookieessimilartechnologiesmodule</a></p>
<p>(a) electronically receiving at a programmed computer system coupled to a global computer network, from at least one server controlled by one of a plurality of unaffiliated third parties</p>	<p>Microsoft’s advertising platform electronically receives at a programmed computer system coupled to a global computer network, from at least one server controlled by one of a plurality of unaffiliated third parties operating respective websites, a partial profile of an entity that uses a user computer coupled to the global computer network and accessing the website, which partial</p>

operating respective websites, a partial profile of an entity that uses a user computer coupled to the global computer network and accessing the website, which partial profile contains at least one profile attribute related to the entity, and automatically with the computer system storing the received partial profile;

profile contains at least one profile attribute related to the entity, and automatically with the computer system storing the received partial profile.

For example, Microsoft's advertising platform electronically receives, at its ad servers which are connected to the Internet, profile data of a user of an Internet-connected computer from at least one server controlled by at least one unaffiliated third party (such as a client of Microsoft's) operating a website. Microsoft's advertising platform automatically stores the profile data with its ad servers.

*See, e.g.:*

We also obtain data from third parties. We protect data obtained from third parties according to the practices described in this statement, plus any additional restrictions imposed by the source of the data.

These third-party sources vary over time and include:

- Data brokers from which we purchase demographic data to supplement the data we collect.
- Services that make user-generated content from their service available to others, such as local business reviews or public social media posts.
- Communication services, including email providers and social networks, when you give us permission to access your data on such third-party services or networks.
- Service providers that help us determine your device's location.
- Partners with which we offer co-branded services or engage in joint marketing activities.
- Developers who create experiences through or for Microsoft products.
- Third parties that deliver experiences through Microsoft products, such as skills related to Cortana.
- Publicly-available sources, such as open government databases.

Cookies are small text files placed on your device to store data that can be recalled by a web server in the domain that placed the cookie. This data often consists of a string of numbers and letters that uniquely identifies your computer, but it can contain other information as well. Some cookies are placed by third parties acting on our behalf. We use cookies and similar technologies to store and honor your preferences and settings, enable you to sign-in, provide interest-based advertising, combat fraud, analyze how our products perform, and fulfill other legitimate purposes described below. Microsoft apps use additional identifiers, such as the advertising ID in Windows, for similar purposes, and many of our websites and applications also contain web beacons or other similar technologies, as described below.

Source:

<https://privacy.microsoft.com/en-us/privacystatement>

(b) wherein receiving the partial profile is achieved by automatic electronic URL redirection from a portion of a page of the website accessed by the user computer;

In the automated method performed by Microsoft's advertising platform, the partial profile is achieved by automatic electronic URL redirection from a portion of a page of the website accessed by the user computer.

For example, Microsoft's advertising platform receives a partial profile as a result of a URL redirection from a page (or portion thereof) that is accessed by the user computer.

*See, e.g.:*

Cookies are small text files placed on your device to store data that can be recalled by a web server in the domain that placed the cookie. This data often consists of a string of numbers and letters that uniquely identifies your computer, but it can contain other information as well. Some cookies are placed by third parties acting on our behalf. We use cookies and similar technologies to store and honor your preferences and settings, enable you to sign-in, provide interest-based advertising, combat fraud, analyze how our products perform, and fulfill other legitimate purposes described below. Microsoft apps use additional identifiers, such as the advertising ID in Windows, for similar purposes, and many of our websites and applications also contain web beacons or other similar technologies, as described below.

- **Interest-based advertising.** Microsoft uses cookies to collect data about your online activity and identify your interests so that we can provide advertising that is most relevant to you. You can opt out of receiving interest-based advertising from Microsoft as described in the [How to access and control your personal data](#) section of this privacy statement.

Source: <https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule>

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- **Showing advertising.** Microsoft uses cookies to record how many visitors have clicked on an advertisement and to record which advertisements you have seen, for example, so you don't see the same one repeatedly.

Source: <https://privacy.microsoft.com/en-US/privacystatement#maincookieessimilartechnologiesmodule>

## In-market audiences: Reach people who are ready to buy

This feature is available in the United States. It is also currently available as a pilot in Australia, Canada, France, Germany, and the United Kingdom.

In-market audiences are curated lists of customers who have shown purchase intent signals within a particular category, including searches and clicks on Bing and page views on Microsoft services. Microsoft Advertising supplies the curated list of potential customers, unlike remarketing in paid search, where the advertiser creates the list. You can target and modify bids for these audiences by associating in-market audience lists to ad groups or campaigns, similar to what you do with remarketing lists.

### Why use in-market audiences?

**Increase conversions.** Reach curated audiences that are more likely to convert in your category.

**Improve bids and targeting.** Set up your ad group or campaign to be exclusive to an audience with an in-market audience or available to everyone, but with a bid adjustment for your targeted audience.

**Simple set-up.** In-market audiences are simple to set up and don't require UET tags.

<https://help.ads.microsoft.com/apex/index/3/en/56851>

## 4. Not capturing ready-to-buy leads? Try Audience In-Marketing.

In-market audiences allows you to expand your ad reach to those who may not know who you are but are ready to buy a product just like yours. For example, with Audience In-Marketing, Bing uses Microsoft AI and third-party data to identify groups of searchers who have shown purchase intent signals in specific categories of products and services.

For example, people looking up flights to Las Vegas and researching excursions to the Grand Canyon would be the perfect audience for an ad for a resort, restaurant or show in the Las Vegas area

<https://www.digitalcommerce360.com/2019/02/25/5-ways-audience-targeting-can-improve-paid-search-results/>

Microsoft uses the data we collect to provide you rich, interactive experiences. In particular, we use data to:

- Provide our products, which includes updating, securing, and troubleshooting, as well as providing support. It also includes sharing data, when it is required to provide the service or carry out the transactions you request.
- Improve and develop our products.
- Personalize our products and make recommendations.
- Advertise and market to you, which includes sending promotional communications, targeting advertising, and presenting you relevant offers.



**Advertising.** Microsoft does not use what you say in email, chat, video calls, or voice mail, or your documents, photos, or other personal files to target ads to you. We use data we collect through our interactions with you, through some of our products, and on third-party web properties, for advertising in our products and on third-party properties. We may use automated processes to help make advertising more relevant to you. For more information about how your data is used for advertising, see the [Advertising](#) section of this privacy statement.

<https://privacy.microsoft.com/en-us/PrivacyStatement>

The ads that you see may also be selected based on other information learned about you over time using demographic data, location data, search queries, interests and favorites, usage data from our products and sites, as well as the sites and apps of our advertisers and partners. We refer to these ads as "interest-based advertising" in this statement.

<https://privacy.microsoft.com/en-us/PrivacyStatement#mainadvertisingmodule>

<p>(c) automatically with the computer system electronically adding the received partial profile to a maintained profile believed to be related to the same entity;</p>	<p>Microsoft's advertising platform automatically with the computer system electronically adding the received partial profile to a maintained profile believed to be related to the same entity.</p> <p>For example, when Microsoft receives the partial profile for a user, it stores that partial profile data in a maintained profile that is believed to be related to the same entity for the purpose of selecting, delivering, measuring, and analyzing the ads and content served for that user.</p> <p><i>See, e.g.:</i></p> <p>We also obtain data from third parties. We protect data obtained from third parties according to the practices described in this statement, plus any additional restrictions imposed by the source of the data. These third-party sources vary over time and include:</p> <ul style="list-style-type: none"> <li>• Data brokers from which we purchase demographic data to supplement the data we collect.</li> <li>• Services that make user-generated content from their service available to others, such as local business reviews or public social media posts.</li> <li>• Communication services, including email providers and social networks, when you give us permission to access your data on such third-party services or networks.</li> <li>• Service providers that help us determine your device's location.</li> <li>• Partners with which we offer co-branded services or engage in joint marketing activities.</li> <li>• Developers who create experiences through or for Microsoft products.</li> <li>• Third parties that deliver experiences through Microsoft products, such as skills related to Cortana.</li> <li>• Publicly-available sources, such as open government databases.</li> </ul> <p>Microsoft uses the data we collect to provide you with rich, interactive experiences. In particular, we use data to:</p> <ul style="list-style-type: none"> <li>• Provide our products, which includes updating, securing, and troubleshooting, as well as providing support. It also includes sharing data, when it is required to provide the service or carry out the transactions you request.</li> <li>• Improve and develop our products.</li> <li>• Personalize our products and make recommendations.</li> <li>• Advertise and market to you, which includes sending promotional communications, targeting advertising, and presenting you with relevant offers.</li> </ul> <p>Source: <a href="https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule">https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule</a></p>

	<p>  How is my list of interests populated?         </p> <p>Based on your browsing, search, and other online activity data, Microsoft infers topics of interest that you may like and adds them to the list. Some of the ads you see are based on these topics of interest. In some cases, interests may not appear in your language.</p> <p>  What are personalized ads?         </p> <p>Personalized ads are advertisements that we believe will be more interesting and useful to you based on data from your devices and other data you share with us, including your searches, site visits, and topics you often explore. We do not show personalized ads if you have turned off the settings on this page.</p> <p>For example, if you search for "luxury cars" on Bing, we may use your search query to show you an ad for a luxury car maker when you visit the MSN website or use MSN mobile.</p> <p>Source: <a href="https://account.microsoft.com/privacy/ad-settings/signedout?refd=about.ads.microsoft.com&amp;ru=https:%2F%2Faccount.microsoft.com%2Fprivacy%2Fad-settings%3Frefd%3Dabout.ads.microsoft.com">https://account.microsoft.com/privacy/ad-settings/signedout?refd=about.ads.microsoft.com&amp;ru=https:%2F%2Faccount.microsoft.com%2Fprivacy%2Fad-settings%3Frefd%3Dabout.ads.microsoft.com</a></p>
(d) automatically with the computer system generating and storing an electronic record of which of the plurality of unaffiliated third parties contributed to the maintained profile particular profile attributes;	<p>Microsoft's advertising platform automatically with the computer system generating and storing an electronic record of which of the plurality of unaffiliated third parties contributed to the maintained profile particular profile attributes.</p> <p>For example, Microsoft's advertising platform generates and stores an electronic record indicating which third party supplied profile attributes used to update the maintained profile.</p> <p><i>See, e.g.:</i></p>



	<p>We also obtain data from third parties. We protect data obtained from third parties according to the practices described in this statement, plus any additional restrictions imposed by the source of the data. These third-party sources vary over time and include:</p> <ul style="list-style-type: none"> <li>• Data brokers from which we purchase demographic data to supplement the data we collect.</li> <li>• Services that make user-generated content from their service available to others, such as local business reviews or public social media posts.</li> <li>• Communication services, including email providers and social networks, when you give us permission to access your data on such third-party services or networks.</li> <li>• Service providers that help us determine your device's location.</li> <li>• Partners with which we offer co-branded services or engage in joint marketing activities.</li> <li>• Developers who create experiences through or for Microsoft products.</li> <li>• Third parties that deliver experiences through Microsoft products, such as skills related to Cortana.</li> <li>• Publicly-available sources, such as open government databases.</li> </ul> <p>Source: <a href="https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule">https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule</a></p>
<p>(e) wherein the maintained profile, including the added partial profile, comprises data used in targeting third-party advertisements to the user computer over the global computer network.</p>	<p>In the automated method performed by Microsoft's advertising platform, the maintained profile, including the added partial profile, comprises data used in targeting third-party advertisements to the user computer over the global computer network.</p> <p>For example, the maintained profile (which includes the added partial profile information) includes data used in targeting third party advertisements to the user's computer.</p> <p><i>See, e.g.:</i></p>

✓ What are personalized ads?

Personalized ads are advertisements that we believe will be more interesting and useful to you based on data from your devices and other data you share with us, including your searches, site visits, and topics you often explore. We do not show personalized ads if you have turned off the settings on this page.

For example, if you search for “luxury cars” on Bing, we may use your search query to show you an ad for a luxury car maker when you visit the MSN website or use MSN mobile.

✓ Why does Microsoft show personalized ads?

We show personalized ads so that customers can more easily find products and services they have expressed an interest in and to enable advertisers to more easily reach customers who have already expressed an interest in their products. We want the ads you see on Microsoft products and services to be useful and relevant to you and to enable our advertisers to reach those customers who are most likely to engage with their products and services.

✓ How does Microsoft deliver personalized ads?

Microsoft partners with Oath, AppNexus and other third party providers to display personalized ads on MSN, Outlook.com and other websites and apps. Microsoft also delivers search ads to Bing and our search syndication partners. To learn more about Microsoft privacy practices, read the [Privacy Statement](#). You can learn more about personalized ads from Oath and AppNexus in the [Oath](#) and [AppNexus](#) privacy statements.

Source: <https://account.microsoft.com/privacy/ad-settings/signedout?refd=about.ads.microsoft.com&ru=https:%2F%2Faccount.microsoft.com%2Fprivacy%2Fad-settings%3Frefd%3Dabout.ads.microsoft.com>

The ads that you see may be selected based on data we process about you, such as your interests and favorites, your location, your transactions, how you use our products, your search queries, or the content you view. For example, if you view content on MSN about automobiles, we may show advertisements about cars; if you search “pizza places in Seattle” on Bing, you may see advertisements in your search results for restaurants in Seattle.

Source: <https://privacy.microsoft.com/en-us/privacystatement#mainadvertisingmodule>